

**Amendments to the Specification:**

Page 5, line 22,

~~FIG. 2 is a~~FIGS 2A and 2B are flow charts illustrating a process for calibrating a process simulator to compensate for process variations of the masking process in accordance with a preferred embodiment of the present invention.

Page, 11, line 9

~~FIG. 2 is a~~FIGS 2A and 2B are flow charts illustrating a process for calibrating a process simulator to compensate for process variations of the masking process in accordance with a preferred embodiment of the present invention. The process begins in step 50 by providing a process simulation program that operates in accordance with the present invention on a server, and making the program available over a network, such as the Internet.

Page 10, line 14,

Referring again to FIG. 2, according to one aspect of the present invention, in step 56, the edges of the mask pattern in the SEM image are automatically detected using pattern recognition. The detected edges may be stored in an edge database in a standard format, such as GDSII (a standard file format for transferring/archiving to the graphic design data). In one preferred embodiment, an algorithm, referred to as a Snake Algorithm, is used to automatically detect the mask edges from the SEM image, as disclosed in U.S. Patent Application Serial No. \_\_\_\_\_ 10/251,083 entitled "Mask Defect Analysis for Both Horizontal and Vertical Processing Effects" (2513P) filed on \_\_\_\_\_ September 20, 2002 by the present assignee and herein incorporated by reference. In an alternative embodiment, an "Adaptive SEM Edge Recognition Algorithm" may

also be used to detect the edges, as disclosed in U.S. Serial No. 10/327,452, entitled "Adaptive SEM Edge Recognition Algorithm," filed on December 2002.

In the Abstract, Page 27

A method and system is provided for automatically calibrating a masking process simulator ~~are disclosed. The method and system include performing a masking process using~~ using a calibration mask and process parameters to produce a calibration pattern on a wafer. A digital image is created of the calibration pattern, and the edges of the pattern are detected ~~from the digital image using pattern recognition~~. Data defining the calibration mask and at least one of the process parameters are ~~then~~ input to a process simulator to produce an alim image estimating the calibration pattern that would be produced by the masking process. ~~The method and system further include overlaying the The alim image and the detected edges of the digital image are~~ then overlaid, and ~~measuring~~ a distance between contours of the pattern in the alim image and the detected edges is measured. Thereafter, ~~one~~One or more mathematical algorithms are used to iteratively change the values of the processing parameters ~~input to the simulator~~ until a set of processing parameter values are found that produces a minimum distance between the contours of the pattern in the alim image and the detected edges, ~~thereby effectively calibrating the process simulator to compensate for process variations of the masking process.~~